

**MCHENRY COUNTY
TUBERCULOSIS CARE AND TREATMENT BOARD MEETING
2200 N. SEMINARY AVE. BUILDING A
WOODSTOCK, ILLINOIS 60098
May 16, 2017
8:00 AM**

AGENDA

1. Call to Order
2. Public Participation
3. Minutes from March 2017 meeting
4. Consent Agenda
 - A) Disbursements; March-April 2017
 - B) Income and Expense Report; March-April 2017
5. Monthly Report
 - A) TB Nurse Report
 - B) Statistics
 - C) IDPH Report
6. Program Highlights
7. Old Business (For Discussion)
8. New Business (For Discussion)
9. Board Issues (For Discussion)
10. Information and Communication (For Discussion)

Wisconsin Tuberculosis Cases by Public Health Region and County 2005-2015

Tsang CA, Langer AJ, Navin TR, Armstrong LR. (2017, March 24). Tuberculosis Among Foreign-Born Persons Diagnosed ≥ 10 Years After Arrival in the United States, 2010–2015. *MMWR Morbidity and Mortality Weekly Report*, 66, 295–298. DOI: <http://dx.doi.org/10.15585/mmwr.mm6611a3>.

11. Executive Session
12. Adjournment

MINUTES AND CONSENT AGENDA

MCHENRY COUNTY TUBERCULOSIS AND TREATMENT BOARD

MEETING MINUTES

MARCH 21, 2017

CALL TO ORDER:

Rebecca Rockwood M.T. called the meeting to order at 8:15am; TB Board members present were: James Mowery M.D. and Rebecca Rockwood M.T; Staff present: Michael Hill MPH, MPA, FACHE, CHES, Administrator, Pamela Morzos MS RN Director of Nursing , Sara Boline, MPH Communicable Disease Coordinator, Karen Stephenson TB RN, and Siobain Daughenbaugh TB RN.

MINUTES:

Dr. James Mowery made motion to approve TB Board Minutes for January/February 2017; second by Rebecca Rockwood M.T.

FINANCIAL STATUS:

Rebecca Rockwood M.T. reviewed the Disbursements as well as the Income and Expense Report for January/February 2017. Dr. James Mowery made motion to approve; second by Rebecca Rockwood M.T.

MONTHLY REPORTS:

Siobain Daughenbaugh TB RN, reviewed TB Nurse Report for January/February 2017.

Skin Testing

- In January, 16 clinics were held with 87 clients tested
- In February, 16 clinics were held with 46 clients tested

Doctor Clinic

- On January 23rd, Doctor's clinic was held with 18 chest x-rays and 9 charts reviewed
- No clinic was held in February

Patient Update

Active Pulmonary case from India will be evaluated at March 6th clinic for discharge. No problems or issues to date.

26 year old gentleman with tuberculosis lymphadenitis completed treatment in January and was discharged by Dr. Hafiz.

Activities

Annual employee testing held January 10th, 13th, and 17th

Head Start Health consortium meeting 1/18/17

PADS testing January 23rd, 25th, and 27th

Webinars /Trainings

1/5/17 Daily TB Treatment Better than Intermittent

1/5/17 Urine TB Test Cuts Mortality in HIV Patients

1/5/17 Two Drugs Promising in XDR-TB

1/6/17 TB Rates Low in RA Patients Taking Tofacitinib

1/25/17 Interface of Molecular & Growth Based Drug Susceptibility Training

2/2/17 Three-Gene signature ID's Active TB

TB and Kids: The Canadian Problem

2/15/17 TB Cases among Foreign- Born Decline.

Early ART, TB Prevention Improve HIV Outcomes, Multidrug TB Prophylaxis Not Needed in Advanced HIV

Up-coming events

Outreach TB testing at Home of the Sparrow in March

CPR training

PADS day and evening site testing

OLD BUSINESS:

- A) Future plans for Annex B Building in 2019
- B) Update on County Board
- C) Future plans to bill insurance companies for TB treatment

NEW BUSINESS:

BOARD ISSUES:

INFORMATION:

The new face of an old disease: TB over 3 decades. (February 2017). Retrieved from <http://www.healio.com/pediatrics/respiratory-infections/news/print/infectious-diseases-in-children/%7Bf38683a0-c34b-4497-996b-479538c4d034%7D/the-new-face-of-an-old-disease-tb-over-3-decades>

ADJOURNMENT:

Rebecca Rockwood M.T. made motion to adjourn meeting at 8:30am; second by Dr. Mowery.

MCHENRY COUNTY HEALTH DEPARTMENT

TB - DISBURSEMENTS

March- April 2017 as of 5-10-2017

SUMMARY

| PERSONAL SERVICES: | ACCT# | PAYROLL |
|---------------------------|--------------|-------------------|
| Acevedo, Lola | 3010 | \$ 5,700.00 |
| Cazares, Maria | 3020 | \$ 3,535.68 |
| Daughenbaugh, Siobain | 3010 | \$ 8,421.29 |
| Schoen, Faith | 3010 | \$ 8,172.00 |
| Stephenson, Karen | 3010 | \$ 5,249.20 |
| | 3025 | included in above |
| FICA | 3105 | \$ 2,377.47 |
| IMRF | 3110 | \$ 3,201.06 |
| INSURANCE | 3146 | \$ 3,582.36 |

| | |
|----------------------|---------------------|
| TOTAL PAYROLL | \$ 40,239.06 |
|----------------------|---------------------|

| DESCRIPTION: | ACCT # | AMOUNT |
|-------------------------|---------------|---------------|
| Contractual Services | 4001 | \$ 5,000.00 |
| Assoc. Dues/Memberships | 4005 | |
| Training | 4006 | |
| Subscriptions | 4008 | |
| Printing | 4055 | |
| Telephone | 4096 | \$ 58.98 |
| Rent | 4101 | |
| Maint Agreements | 4130 | \$ 1,347.75 |
| Maint Office Equipment | 4131 | \$ 38.28 |
| Medical | 4246 | \$ 1,616.00 |
| Special Consultants | 4435 | |
| Private lab services | 4442 | \$ 24.90 |
| Refuse disposal | 4449 | \$ 50.00 |
| Contingent | 4570 | |
| Office Supplies | 5010 | |
| Office Equipment | 5020 | |
| Postage | 5030 | |
| Mileage | 5040 | \$ 89.88 |
| Meeting Expenses | 5050 | |
| Supplies | 5070 | |
| Medical Supplies | 5080 | \$ 0.16 |
| Medication | 5085 | \$ 736.68 |
| Misc Fees | 8090 | \$ 10.00 |

| | |
|-----------------------|--------------------|
| TOTAL EXPENSES | \$ 8,972.63 |
|-----------------------|--------------------|

| | |
|--------------------|---------------------|
| Grand Total | \$ 49,211.69 |
|--------------------|---------------------|

MCHENRY COUNTY HEALTH DEPARTMENT
TB - DISBURSEMENTS ~ as of 5-10-2017
March 2017 (FY17)

| <u>Personal Service</u> | <u>ACCT #</u> | <u>PAYROLL</u> |
|-------------------------|---------------|-------------------|
| Acevedo, Lola | 3010 | \$2,850.00 |
| Cazares, Maria | 3020 | \$1,767.84 |
| Daughenbaugh, Siobain | 3010 | \$4,165.52 |
| Schoen, Faith | 3010 | \$4,086.00 |
| Stephenson, Karen | 3010 | \$2,624.60 |
| | 3025 | Included in above |
| FICA | 3105 | \$1,185.28 |
| IMRF | 3110 | \$1,595.88 |
| INSURANCE | 3146 | \$1,791.18 |
| | Payroll Total | \$20,066.30 |

| <u>VD</u> | <u>VENDOR</u> | <u>ACCT #</u> | <u>AMOUNT</u> |
|-----------|--------------------------------------|---------------|---------------|
| JE217223 | HD Admin Charge - Q1 | 4001 | \$ 5,000.00 |
| VD313422 | VERIZON WIRELESS | 4096 | \$ 30.45 |
| VD313465 | STANS OFFICE MACHINES INC | 4131 | \$ 38.28 |
| VC278922 | MERCY HEALTH SYSTEM CORP OMI | 4246 | \$ 186.00 |
| VC279555 | MERCY HEALTH SYSTEM CORP OMI | 4246 | \$ 434.00 |
| VC279556 | METRO INFECTIOUS DISEASE CONSULTANTS | 4246 | \$ 500.00 |
| VC279281 | ACL LABORATORIES | 4442 | \$ 14.94 |
| VC279280 | HEALTHCARE WASTE MANAGEMENT | 4449 | \$ 50.00 |
| VD313626 | ACEVEDO LOLA | 5040 | \$ 34.24 |
| VD313626 | DAUGHENBAUGH SIOBAIN | 5040 | \$ 25.68 |
| VC278916 | BRANDT PHARMACY INC | 5085 | \$ 105.24 |
| VC279282 | BRANDT PHARMACY INC | 5085 | \$ 122.78 |
| VC279447 | BRANDT PHARMACY INC | 5085 | \$ 17.54 |
| VC279446 | BRANDT PHARMACY INC | 5085 | \$ 105.24 |
| VC279643 | BRANDT PHARMACY INC | 5085 | \$ 122.78 |
| VC279554 | BRANDT PHARMACY INC | 5085 | \$ 87.70 |

Total Expenses \$6,874.87

Grand Total \$26,941.17

MCHENRY COUNTY HEALTH DEPARTMENT
TB - DISBURSEMENTS as of 5-10-2017
April 2017 (FY17)

| <u>Personal Service</u> | <u>ACCT #</u> | <u>PAYROLL</u> |
|-------------------------|----------------------|--------------------|
| Acevedo, Lola | 3010 | \$2,850.00 |
| Cazares, Maria | 3020 | \$1,767.84 |
| Daughenbaugh, Siobain | 3010 | \$4,255.77 |
| Schoen, Faith | 3010 | \$4,086.00 |
| Stephenson, Karen | 3010 | \$2,624.60 |
| | 3025 | Included in above |
| FICA | 3105 | \$1,192.19 |
| IMRF | 3110 | \$1,605.18 |
| INSURANCE | 3146 | \$1,791.18 |
| | Payroll Total | \$20,172.76 |

| <u>VD</u> | <u>VENDOR</u> | <u>ACCT #</u> | <u>AMOUNT</u> |
|-----------|---------------------------|---------------|---------------|
| VD313962 | VERIZON WIRELESS | 4096 | \$28.53 |
| VC279720 | TELETASK INC | 4130 | \$1,092.75 |
| VD314069 | STANS OFFICE MACHINES INC | 4130 | \$255.00 |
| VC280335 | MERCY HEALTH SYSTEM CORP | 4246 | \$496.00 |
| VC280200 | ACL LABORATORIES | 4442 | \$9.96 |
| VD313945 | PEREZ ANGELICA | 5040 | \$29.96 |
| VD313961 | R&S NORTHEAST LLC | 5080 | \$0.16 |
| VC280199 | BRANDT PHARMACY INC | 5085 | \$87.70 |
| VC280336 | BRANDT PHARMACY INC | 5085 | \$87.70 |
| VD314011 | AVILA MARIELA | 8090 | \$10.00 |

| | |
|-----------------------|-------------------|
| Total Expenses | \$2,097.76 |
|-----------------------|-------------------|

| | |
|--------------------|--------------------|
| Grand Total | \$22,270.52 |
|--------------------|--------------------|

TUBERCULOSIS CARE AND TREATMENT FY2017

| LINE ITEM | DEC | JAN | FEB | MARCH | APRIL | MAY | JUNE | JULY | AUG | SEPT | OCT | NOV | TOTAL | ANNUAL BUDGET | BALANCE | % |
|----------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|-----------------------|----------------------|----------------------|--------------|
| 7010 PROPERTY TAXES | | | | | | | | | | | | | \$0.00 | \$ 250,000.00 | \$ 250,000.00 | 0.0% |
| 8000 FEES FOR SERVICE | \$160.00 | \$220.00 | \$310.00 | \$210.00 | \$460.00 | | | | | | | | \$1,580.00 | \$ 19,000.00 | \$ 17,420.00 | 8.3% |
| 9405 | | | | | | | | | | | | | \$0.00 | \$ | - | 0.0% |
| 9417 MEDICAL | | | | \$4.00 | | | | | | | | | \$4.00 | \$ | (4.00) | #DIV/0! |
| 9510 INTEREST INCOME | \$204.50 | \$236.49 | \$203.71 | \$233.49 | \$266.88 | | | | | | | | \$1,165.07 | \$ 600.00 | \$ (565.07) | 194.2% |
| 9511 STATE TAX DIST INT | | | | | | | | | | | | | \$0.00 | \$ 35.00 | \$ 35.00 | 0.0% |
| 9990 | | | | | | | | | | | | | \$0.00 | \$ 106,451.00 | \$ 106,451.00 | 0.0% |
| TOTAL REVENUE | \$564.50 | \$456.49 | \$513.71 | \$487.49 | \$736.88 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$2,749.07 | \$ 376,076.00 | \$ 373,326.93 | 0.7% |
| 3010 REGULAR SALARIES | \$17,745.79 | \$9,436.28 | \$13,726.11 | \$13,039.81 | \$12,728.07 | | | | | | | | \$66,676.06 | \$ 166,215.00 | \$ 99,538.94 | 40.1% |
| 3020 PART TIME SALARY | \$2,449.99 | \$1,473.71 | \$1,700.22 | \$1,680.21 | \$1,680.21 | | | | | | | | \$9,044.34 | \$ 20,665.00 | \$ 11,620.66 | 43.8% |
| 3025 Holiday | \$1,510.22 | \$1,929.64 | | \$773.94 | \$905.17 | | | | | | | | \$5,118.97 | \$ 9,896.00 | \$ 4,717.03 | 52.0% |
| 3040 Overtime | | | | | \$270.76 | | | | | | | | \$270.76 | \$ 3,934.00 | \$ 3,934.00 | 0.0% |
| 3105 SMOKE/CTY SHARE | \$1,660.50 | \$982.23 | \$1,184.70 | \$1,185.28 | \$1,192.19 | | | | | | | | \$6,204.90 | \$ 15,350.00 | \$ 9,145.10 | 40.4% |
| 3110 ALL MORG REIT FUND | \$2,222.68 | \$1,322.48 | \$1,595.10 | \$1,595.88 | \$1,605.18 | | | | | | | | \$8,341.33 | \$ 29,667.00 | \$ 12,325.68 | 40.4% |
| 3140 EMPLOYEE HEALTH | | \$2,647.18 | \$1,791.18 | | | | | | | | | | \$4,438.36 | \$ 33,222.00 | \$ 28,783.64 | 13.4% |
| PERSONNEL SUBTOTAL | \$25,690.18 | \$17,291.83 | \$20,667.21 | \$18,275.12 | \$18,381.58 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$100,094.71 | \$ 269,889.00 | \$169,794.29 | 37.1% |
| 4001 Contractual Services | | | \$199.00 | \$5,000.00 | | | | | | | | | \$5,199.00 | \$ 25,000.00 | \$ 19,801.00 | 20.8% |
| 4005 ASSOC DIRECTOR | | | | | | | | | | | | | \$0.00 | \$ 350.00 | \$ 350.00 | 0.0% |
| 4006 TRAINING | | | | | | | | | | | | | \$0.00 | \$ 1,000.00 | \$1,000.00 | 0.0% |
| 4008 SUBSCRIPTIONS | | | | | | | | | | | | | \$0.00 | \$ | \$0.00 | #DIV/0! |
| 4055 CONTRACTING | | | | | | | | | | | | | \$0.00 | \$ 400.00 | \$400.00 | 0.0% |
| 4056 TELEPHONE | | \$28.30 | \$27.29 | \$30.45 | \$28.53 | | | | | | | | \$114.57 | \$ 1,800.00 | \$ 1,685.43 | 6.4% |
| 4101 RENT | | | | | | | | | | | | | \$0.00 | \$ | \$0.00 | #DIV/0! |
| 4170 MAINTENANCE Agreement | | | \$25.29 | | \$1,347.75 | | | | | | | | \$1,373.04 | \$ 562.00 | \$ (811.04) | 244.3% |
| 4131 MAINTENANCE OFFICE EQUIP | | | | \$38.28 | | | | | | | | | \$38.28 | \$ 500.00 | \$461.72 | 7.7% |
| 4246 MEDICAL | | | \$372.00 | \$1,120.00 | \$496.00 | | | | | | | | \$1,988.00 | \$ 35,000.00 | \$ 33,012.00 | 5.7% |
| 4320 Repair and Maintenance | | | \$14.94 | \$14.94 | \$9.96 | | | | | | | | \$0.00 | \$ 2,500.00 | \$2,460.16 | 1.6% |
| 4442 LAB | | | | \$50.00 | | | | | | | | | \$50.00 | \$ 850.00 | \$800.00 | 5.9% |
| 4449 LAB/REAGENT DISPOSAL | | | | | | | | | | | | | \$0.00 | \$ | \$0.00 | #DIV/0! |
| 4570 Outpatient Fee Doc Expense | | | | | | | | | | | | | \$0.00 | \$ 67,962.00 | \$59,159.27 | 13.0% |
| CONTRACTUAL SUBTOTAL | \$0.00 | \$28.30 | \$628.52 | \$6,253.67 | \$1,482.24 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$8,802.73 | \$ 1,700.00 | \$ 1,700.00 | 0.0% |
| 5010 OFFICE SUPPLIES | | | | | | | | | | | | | \$0.00 | \$ 1,000.00 | \$1,000.00 | 0.0% |
| 5020 OFFICE EQUIPMENT | | | \$21.27 | | | | | | | | | | \$21.27 | \$ | \$78.73 | 21.3% |
| 5040 OFFICE | | \$154.44 | \$100.58 | \$59.92 | \$29.96 | | | | | | | | \$344.90 | \$ 4,000.00 | \$3,655.10 | 8.6% |
| 5050 RECEIVING EXPENSE | | | | | | | | | | | | | \$0.00 | \$ 2,000.00 | \$2,000.00 | 0.0% |
| 5070 SUPPLIES | | | | | | | | | | | | | \$0.00 | \$ 5,000.00 | \$4,995.84 | 0.0% |
| 5090 MEDICAL SUPPLIES | | | | | \$0.16 | | | | | | | | \$0.16 | \$ 20,425.00 | \$18,997.73 | 7.0% |
| 5096 AMBULANCE | | \$532.73 | \$157.86 | \$561.28 | \$175.40 | | | | | | | | \$1,427.27 | \$ 500.00 | \$500.00 | 0.0% |
| 5115 Computer equipment under SW | | | | | | | | | | | | | \$0.00 | \$ 2,000.00 | \$2,000.00 | 0.0% |
| 5125 Computer Software under SW | | | | | | | | | | | | | \$0.00 | \$ | \$0.00 | #DIV/0! |
| 5160 Vehicle | | | | | | | | | | | | | \$0.00 | \$ | \$0.00 | 0.0% |
| 5210 REPRODUCTIONS | | | | | | | | | | | | | \$0.00 | \$ | \$0.00 | 0.0% |
| 5999 TRAVEL CASH | | | | | | | | | | | | | \$0.00 | \$ | \$0.00 | 0.0% |
| COMMODITIES SUBTOTAL | \$0.00 | \$687.17 | \$279.71 | \$621.20 | \$206.52 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$1,793.60 | \$ 36,225.00 | \$36,431.40 | 4.7% |
| TOTAL EXPENSES | \$25,689.18 | \$18,506.99 | \$20,975.54 | \$25,149.99 | \$20,469.34 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$110,691.04 | \$ 376,076.00 | \$265,384.96 | 29.4% |
| NET INCOME | (\$25,024.68) | (\$18,050.50) | (\$20,461.83) | (\$24,662.50) | (\$19,742.46) | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | (\$107,941.97) | | | |
| BANK BALANCE: | \$436,058.81 | \$417,910.31 | \$397,448.48 | \$373,990.38 | \$353,882.22 | | | | | | | | | | | |

Fund Balance

29.4%

MONTHLY REPORT

MCDH TB Nurse Report

March/April 2017

Skin Testing

- In March, 18 clinics were held with 58 clients tested
- In April, 15 clinics were held with 52 clients tested

Doctor Clinic

- On March 6th, Doctors clinic was held with 20 chest x-rays and 18 charts reviewed.
- On April 10th, Doctors clinic was held with 14 chest x-rays and 2 charts reviewed.

Patient Update

Activities

Head Start Health Advisory Committee meeting 4/19/17

PADS testing evening sites 4/10/17 & 4/12/17

Outreach testing at Three Oaks on 4/10/17 & 4/13/17

Updated Fit testing TB staff 4/5/17

Webinars/Trainings:

| | |
|----------------|--|
| March Webinars | Testing for TB infection |
| | Essentials of TB prevention: TB infection |
| | Mycobacteriology Laboratory |
| | Enhancing Immigrant Communication |
| | TB Immune Response in Children May Predict Later Disease |
| April Webinars | TB News Good and Bad: CDC |
| | U shaped Curve |
| | Pesticide Poisonings Are You Ready |
| | Breaking Research in IGRA Use in Pediatric TB Testing |

Up-coming events

Outreach Old Firehouse Assistance Center for TB testing

CPR training

TB for the Primary Care Provider event at Rush Copley Heart Institute June 14, 2017

TUBERCULOSIS PROGRAM MONTHLY REPORT FY 2017

EDUCATION

| TB STATISTICS | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | YTD 17 | YTD 16 |
|--|-------|-------|-------|-------|-------|-----|-----|-----|-----|-----|-----|-----|--------|--------|
| PRESENTATIONS | | | | | | | | | | | | | | |
| # of Presentations | | | | | | | | | | | | | | 2 |
| # of Attendees | | | | | | | | | | | | | | 110 |
| 1:1 EDUCATION (PUBLIC & HCPs) (HOURS) | | | | | | | | | | | | | | |
| Phone contacts | 6.16 | 6.84 | 7.92 | 8.67 | 7.5 | | | | | | | | 37.09 | 32 |
| Face to Face contacts (@MCDH) | 10.09 | 19.92 | 13.83 | 15.25 | 15.25 | | | | | | | | 74.34 | 84 |
| Case Mangement | 5.25 | 7.09 | 10.75 | 4.75 | 8.17 | | | | | | | | 36.01 | 42 |
| TB Board Meeting Prep | | 2 | | 2 | | | | | | | | | 4 | 2.75 |

TESTING

| TB SKIN TEST STATISTICS | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | YTD 17 | YTD 16 |
|--------------------------------------|-----------|-----------|-----------|-----------|-----------|-----|-----|-----|-----|-----|-----|-----|------------|------------|
| MCDH (Annex B) | | | | | | | | | | | | | | |
| # of Clinics | 18 | 16 | 16 | 18 | 15 | | | | | | | | 83 | 77 |
| # of IGRAs | | | | | | | | | | | | | | |
| # of skin tests | 53 | 87 | 46 | 58 | 52 | | | | | | | | 296 | 316 |
| Outreach Testing | | | | | | | | | | | | | | |
| PADS | | | | | | | | | | | | | | |
| RN time | 5.5 | 4.5 | 6.5 | 5.5 | 7 | | | | | | | | 29 | 27 |
| # of site visits | 2 | 2 | 3 | 2 | 2 | | | | | | | | 11 | 9 |
| # of skin tests | 6 | 5 | 3 | 3 | 2 | | | | | | | | 19 | 17 |
| Contact Investigation Testing | | | | | | | | | | | | | | |
| RN time | | | | | | | | | | | | | | |
| # of site visits | | | | | | | | | | | | | | |
| # of skin tests | | | | | | | | | | | | | | |
| Total Skin Tests | 59 | 92 | 49 | 61 | 54 | | | | | | | | 315 | 333 |

| POSITIVE SKIN TEST STATISTICS | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | YTD 17 | YTD 16 |
|---|-------------|-------------|-------------|-------------|-------------|-----|-----|-----|-----|-----|-----|-----|-------------|-------------|
| Positive skin tests/Outside agency | 4 | 2 | | 1 | 6 | | | | | | | | 13 | 12 |
| Positive skin tests /MCDH clinics | 1 | 1 | 1 | 1 | | | | | | | | | 4 | 2 |
| Positive skin tests/PADS | | | | | | | | | | | | | | |
| Positive skin tests /Outreach Sites | | | | | | | | | | | | | | |
| Positive skin tests/Contacts | | | | | | | | | | | | | | |
| Total | 5 | 3 | 1 | 2 | 6 | | | | | | | | 17 | 14 |
| County Positive Skin Test Rate^A | 1.63 | 0.98 | 0.33 | 0.65 | 1.95 | | | | | | | | 5.53 | 4.55 |

| DIAGNOSTIC STATISTICS | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | YTD 17 | YTD 16 |
|--------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------|--------|
| X-Rays Ordered | 7 | 4 | 9 | 7 | 5 | | | | | | | | 32 | 29 |
| Sputum Collected | | 9 | 9 | | | | | | | | | | 18 | 3 |
| Laboratory Tests Ordered | 4 | 1 | 3 | 10 | 2 | | | | | | | | 20 | 10 |

MD CLINIC (HOURS)

| MD CLINIC (HOURS) | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | YTD 17 | YTD 16 |
|-----------------------------------|-----|--------------|--------------|--------------|--------------|-----|-----|-----|-----|-----|-----|-----|--------------|------------|
| Pre Clinic RN Prep Time | | 2.83 | 2.5 | 1 | 1 | | | | | | | | 7.33 | 18 |
| Pre Clinic Clerical Prep Time | | 14.25 | 16.75 | 3.5 | 2.5 | | | | | | | | 37 | 55 |
| Total Pre Clinic Prep Time | | 17.08 | 19.25 | 4.5 | 3.5 | | | | | | | | 44.33 | 73 |
| Total Clinic Time | | 2 | | 2 | 3.25 | | | | | | | | 7.25 | 10 |
| Post Clinic RN Time | | 3 | | 2.5 | 2.33 | | | | | | | | 7.83 | 15 |
| Post Clinic Clerical Time | | 18.75 | | 13.25 | 11.5 | | | | | | | | 43.5 | 66 |
| Total Post Clinic Contact | | 21.75 | | 15.75 | 13.83 | | | | | | | | 51.33 | 81 |
| Total | | 40.83 | 19.25 | 22.25 | 20.58 | | | | | | | | 102.9 | 318 |

LTBI

| PREVENTIVE STATISTICS | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | YTD 17 | YTD 16 |
|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------|--------|
| Positive clients transferred into county | | | | | | | | | | | | | | |
| Positive Interviews | 7 | 4 | 6 | 7 | 5 | | | | | | | | 29 | 33 |
| Clients Starting LTBI | 3 | 1 | 3 | 10 | 1 | | | | | | | | 18 | 9 |

^ARate is per 100,000 using the 2015 estimated census population of 307,357 from the US Census Bureau

| CLIENTS STARTING LTBI | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | YTD 17 | YTD 16 |
|--------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------|--------|
| GENDER | | | | | | | | | | | | | | |
| Male | 1 | 1 | 1 | 4 | | | | | | | | | 7 | 2 |
| Female | 2 | | 2 | 6 | 1 | | | | | | | | 11 | 7 |
| AGE | | | | | | | | | | | | | | |
| Children (0-18 years) | 1 | | | 3 | | | | | | | | | 4 | 1 |
| Adult (19-64 years) | 2 | 1 | 2 | 6 | 1 | | | | | | | | 12 | 8 |
| Senior Adult (65+ years) | | | 1 | 1 | | | | | | | | | 2 | |
| FOREIGN BORN | | | | | | | | | | | | | | |
| Yes | 3 | | 3 | 9 | 1 | | | | | | | | 16 | 7 |
| No | | 1 | | 1 | | | | | | | | | 2 | 2 |

| TREATMENT COMPLETION | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | YTD 17 | YTD 16 |
|-------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------|--------|
| Clients Completing LTBI | 1 | 1 | 4 | | | | | | | | | | 6 | 6 |
| Failure to Complete | | 2 | | | | | | | | | | | 2 | 17 |
| Moved | | 1 | | | | | | | | | | | 1 | 2 |
| Lost to F/U | | | | | | | | | | | | | | 13 |
| Declined- Personal | | | | | | | | | | | | | | 2 |
| Declined-Medical | | 1 | | | | | | | | | | | 1 | |
| Deceased | | | | | | | | | | | | | | |
| Other | | | | | | | | | | | | | | |

ACTIVE TB

| ACTIVE TB STATISTICS | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | YTD 17 | YTD 16 |
|--|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------|--------|
| # Active TB Cases Identified | | | | | | | | | | | | | | |
| County Active TB rate ^a | | | | | | | | | | | | | | |
| Active Cases Transferred OUT of McHenry County | | | | | | | | | | | | | | |
| Active Cases Transferred INTO McHenry County | | | | | | | | | | | | | | |
| Total Active TB Caseload* | 1 | 1 | | | | | | | | | | | 1 | |
| DOT Visits | 21 | 14 | | | | | | | | | | | 35 | |
| DOT Visit/Travel Time (Hours) | 10.5 | 6.5 | | | | | | | | | | | 17 | |
| # TB Contact Investigations Initiated | | | | | | | | | | | | | | |
| # Suspects Investigated | | | | | | | | | | | | | | |

*Number does not accumulate, it reflects the number of people for whom the DOT visits and DOT time account for

| TREATMENT COMPLETION | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | YTD 17 | YTD 16 |
|---------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------|--------|
| Cases Completing Active TB Medication | | 1 | | | | | | | | | | | 1 | |
| Failure to Complete | | | | | | | | | | | | | | |
| Moved | | | | | | | | | | | | | | |
| Lost to F/U | | | | | | | | | | | | | | |
| Declined- Personal | | | | | | | | | | | | | | |
| Declined-Medical | | | | | | | | | | | | | | |
| Deceased | | | | | | | | | | | | | | |
| Other | | | | | | | | | | | | | | |

| RESISTANCE CLASSIFICATIONS | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | YTD 17 | YTD 16 |
|----------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------|--------|
| #MDR Cases Identified | | | | | | | | | | | | | | |
| #XDR Cases Identified | | | | | | | | | | | | | | |

| ACTIVE TB STATISTICS | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | YTD 17 | YTD 16 |
|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------|--------|
| LOCATION OF ACTIVE TB IDENTIFIED | | | | | | | | | | | | | | |
| Pulmonary | | | | | | | | | | | | | | |
| Extrapulmonary | | | | | | | | | | | | | | |
| GENDER | | | | | | | | | | | | | | |
| Male | | | | | | | | | | | | | | |
| Female | | | | | | | | | | | | | | |
| AGE | | | | | | | | | | | | | | |
| Children (0-18 years) | | | | | | | | | | | | | | |
| Adult (19-64 years) | | | | | | | | | | | | | | |
| Senior Adult (65+ years) | | | | | | | | | | | | | | |
| FOREIGN BORN | | | | | | | | | | | | | | |
| Yes | | | | | | | | | | | | | | |
| No | | | | | | | | | | | | | | |

^aRate is per 100,000 using the 2015 estimated census population of 307,357 from the US Census Bureau

NIPHC Report on TB from Elaine Darnall

4/26/2017

I. Numbers of Cases

There have been 74 cases of active TB reported and confirmed as of yesterday. Compared to the same week last year, there were 95 cases. We are 21 cases behind the number reported this week last year.

2017 to date

| | |
|---------------|----|
| DuPage County | 5 |
| Kane County | 7 |
| Kendall | 1 |
| Lake County | 3 |
| Will County | 2 |
| Suburban Cook | 16 |
| Chicago | 31 |

II. Drug Resistance

Of the 74 cases reported thus far, 65 were culture positive. Of those culture positive, 38 (58.5%) have their susceptibilities reported.

So far, only 2 cases show resistance to first line drugs, both to Isoniazid.

III. Dead at Diagnosis or Died on Therapy

Of the 74 cases reported thus far, 7 cases were either dead at dx, or died during therapy.

IV. Summit of Hope

The Summit of Hope is a community expo, bringing together local service providers to create a "one-stop" environment for invited parolees and probationers to obtain necessary assistance to move past barriers, which may prevent an individual from leading a successful life.

The mission of the Summit of Hope is to guide and assist parolees and probationers with available services to better ensure reintegration into the community and thus reduce recidivism

Upcoming Summit of Hope Events:

May 5, 2017 – Aurora - Painters District Council 30, 1905 Sequoia Drive, Aurora, IL 60506

June 15, 2017 – Springfield - Illinois State Fair Grounds, Orr Building, 801 E. Sangamon Avenue, (4 H Road), Springfield, IL 62702

I am told there will be another one in North Chicago (Lake county) the end of June, but the exact date and location is not yet listed on the Summit of Hope webpage.

<https://www.illinois.gov/idoc/communityresources/summitofhoperegistration/Pages/default.aspx>

PROGRAM HIGHLIGHTS

OLD BUSINESS

NEW BUSINESS

BOARD ISSUES

INFORMATION



Wisconsin Tuberculosis Cases by Public Health Region and by County 2005 – 2015

| NORTHERN | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|--|------|------|------|------|------|------|------|------|------|------|------|
| Ashland | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Bayfield | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Florence | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Forest | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Iron | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Langlade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lincoln | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Marathon | 4 | 1 | 1 | 1 | 1 | 2 | 1 | 3 | 3 | 1 | 2 |
| Oneida | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Portage | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |
| Price | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Sawyer | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Taylor | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Vilas | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |
| Wood | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTALS | 5 | 6 | 4 | 1 | 2 | 2 | 3 | 3 | 3 | 5 | 3 |
| WESTERN | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
| Barron | 3 | 3 | 1 | 0 | 0 | 1 | 1 | 0 | 2 | 0 | 0 |
| Buffalo | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Burnett | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Chippewa | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| Clark | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Douglas | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dunn | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Eau Claire | 1 | 1 | 3 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 2 |
| Jackson | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| La Crosse | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 2 | 1 | 1 | 1 |
| Monroe | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 4 | 0 | 1 | 0 |
| Pepin | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pierce | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| Polk | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Rusk | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| St Croix | 1 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 |
| Trempealeau | 0 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Washburn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTALS | 6 | 9 | 11 | 3 | 2 | 5 | 5 | 6 | 4 | 2 | 5 |
| * Shared case between Columbia and Public Health Madison-Dane County | | | | | | | | | | | |
| ** Includes Appleton | | | | | | | | | | | |
| *** Includes Menasha | | | | | | | | | | | |
| STATE TOTAL | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
| Cases | 78 | 75 | 70 | 68 | 67 | 55 | 70 | 71 | 50 | 48 | 69 |
| Rate ^{oo} | 1.4 | 1.3 | 1.2 | 1.2 | 1.2 | 1.0 | 1.2 | 1.2 | 0.87 | 0.83 | 1.2 |

^{oo}Based on annual populations estimates provided by Wisconsin Department of Administration



Wisconsin Tuberculosis Cases by Public Health Region and by County 2005 – 2015

| SOUTHEASTERN | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Kenosha | 2 | 3 | 0 | 4 | 4 | 2 | 3 | 1 | 1 | 1 | 1 |
| Milwaukee | 27 | 29 | 30 | 31 | 27 | 21 | 27 | 32 | 11 | 14 | 29 |
| Ozaukee | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 |
| Racine | 0 | 0 | 2 | 4 | 2 | 1 | 4 | 4 | 2 | 3 | 4 |
| Walworth | 0 | 0 | 0 | 3 | 0 | 0 | 1 | 0 | 1 | 1 | 0 |
| Washington | 3 | 0 | 4 | 0 | 2 | 2 | 1 | 1 | 0 | 0 | 0 |
| Waukesha | 5 | 3 | 4 | 4 | 4 | 0 | 2 | 2 | 2 | 4 | 2 |
| TOTALS | 37 | 36 | 40 | 46 | 40 | 26 | 38 | 40 | 18 | 23 | 36 |
| SOUTHERN | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
| Adams | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Columbia | 1 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1* |
| Crawford | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dane | 15 | 9 | 4 | 8 | 12 | 11 | 12 | 13 | 6 | 7 | 8* |
| Dodge | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| Grant | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Green | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 2 | 0 |
| Iowa | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Jefferson | 1 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 0 |
| Juneau | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lafayette | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Richland | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Rock | 2 | 1 | 1 | 1 | 2 | 0 | 1 | 0 | 0 | 0 | 1 |
| Sauk | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Vernon | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTALS | 19 | 14 | 7 | 11 | 16 | 13 | 15 | 13 | 7 | 11 | 9* |
| NORTHEASTERN | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
| Brown | 5 | 3 | 3 | 3 | 2 | 1 | 5 | 3 | 2 | 1 | 2 |
| Calumet | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| Door | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| Fond du Lac | 0 | 1 | 0 | 0 | 1 | 2 | 0 | 0 | 1 | 1 | 2 |
| Green Lake | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Kewaunee | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| Manitowoc | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 2 | 0 | 0 |
| Marinette | 0 | 1 | 0 | 0 | 0 | 3 | 0 | 0 | 1 | 0 | 0 |
| Marquette | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Menominee | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Oconto | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Outagamie | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 2 | 1 | 2 | 2** |
| Shawano | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| Sheboygan | 1 | 0 | 0 | 3 | 0 | 0 | 1 | 3 | 10 | 2 | 1 |
| Waupaca | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Waushara | 2 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| Winnebago | 0 | 0 | 2 | 0 | 1 | 2 | 2 | 0 | 1 | 0 | 4*** |
| TOTALS | 11 | 10 | 8 | 7 | 7 | 9 | 9 | 9 | 18 | 7 | 16 |



Wisconsin Tuberculosis Cases by Public Health Region and by County 2005 – 2015

Statewide case rate: 69 cases/5,753,324 pop X 100,000 = 1.2 cases per 100,000

Case rates by public health region:

Southeastern Region:

| | Population 2015 | Cases 2015 | Rate/100,000 |
|----------|-----------------|------------|--------------|
| Regional | 2,030,336 | 36 | 1.77 |

Southern Region:

| | Population 2015 | Cases 2015 | Rate/100,000 |
|----------|-----------------|------------|--------------|
| Regional | 1,204,960 | 9 | 0.75 |

Northeastern Region:

| | Population 2015 | Cases 2015 | Rate/100,000 |
|----------|-----------------|------------|--------------|
| Regional | 1,241,855 | 16 | 1.29 |

Northern Region:

| | Population 2015 | Cases 2015 | Rate/100,000 |
|----------|-----------------|------------|--------------|
| Regional | 490,323 | 3 | 0.61 |

Western Region:

| | Population 2015 | Cases 2015 | Rate/100,000 |
|----------|-----------------|------------|--------------|
| Regional | 785,850 | 5 | 0.63 |

Multi-drug resistant cases: 4

Deaths from TB: 7

Tuberculosis Among Foreign-Born Persons Diagnosed ≥ 10 Years After Arrival in the United States, 2010–2015

Clarisse A. Tsang, MPH¹; Adam J. Langer, DVM¹; Thomas R. Navin, MD¹; Lori R. Armstrong, PhD¹

The majority of tuberculosis (TB) cases in the United States are attributable to reactivation of latent TB infection (LTBI) (1). LTBI refers to the condition when a person is infected with *Mycobacterium tuberculosis* without signs and symptoms, or radiographic or bacteriologic evidence of TB disease. CDC and the U.S. Preventive Services Task Force (USPSTF) recommend screening populations at increased risk for LTBI, including persons who have lived in congregate settings at high risk and persons who were born in, or are former residents of countries with TB incidence ≥ 20 cases per 100,000 population (2–4). In 2015, foreign-born persons constituted 66.2% of U.S. TB cases (5). During the past 30 years, screening of persons from countries with high TB rates has focused on overseas screening for immigrants and refugees, and domestic screening for persons who have newly arrived in the United States (6,7). However, since 2007, an increasing number and proportion of foreign-born patients receiving a diagnosis of TB first arrived in the United States ≥ 10 years before the development and diagnosis of TB disease. To better understand how this group of patients differs from persons who developed TB disease and received a diagnosis < 10 years after U.S. arrival, CDC analyzed data for all reported TB cases in the United States since 1993 in the National TB Surveillance System (NTSS). After adjusting for age and other characteristics, foreign-born persons who arrived in the United States ≥ 10 years before diagnosis were more likely to be residents of a long-term care facility or to have immunocompromising conditions other than human immunodeficiency virus (HIV) infection. These findings support using the existing CDC and USPSTF recommendations for TB screening of persons born in countries with high TB rates regardless of time since arrival in the United States (2,3).

In the NTSS, persons are categorized as foreign-born if they were born outside of the United States, U.S. insular* areas, and the freely associated states† (except persons born abroad to a U.S. citizen parent). The number of years in the United States is defined as the interval from first entry into the United States to the date the TB patient was first reported to a health department. Persons were classified as having arrived in the United States < 10 years or ≥ 10 years before diagnosis. Persons

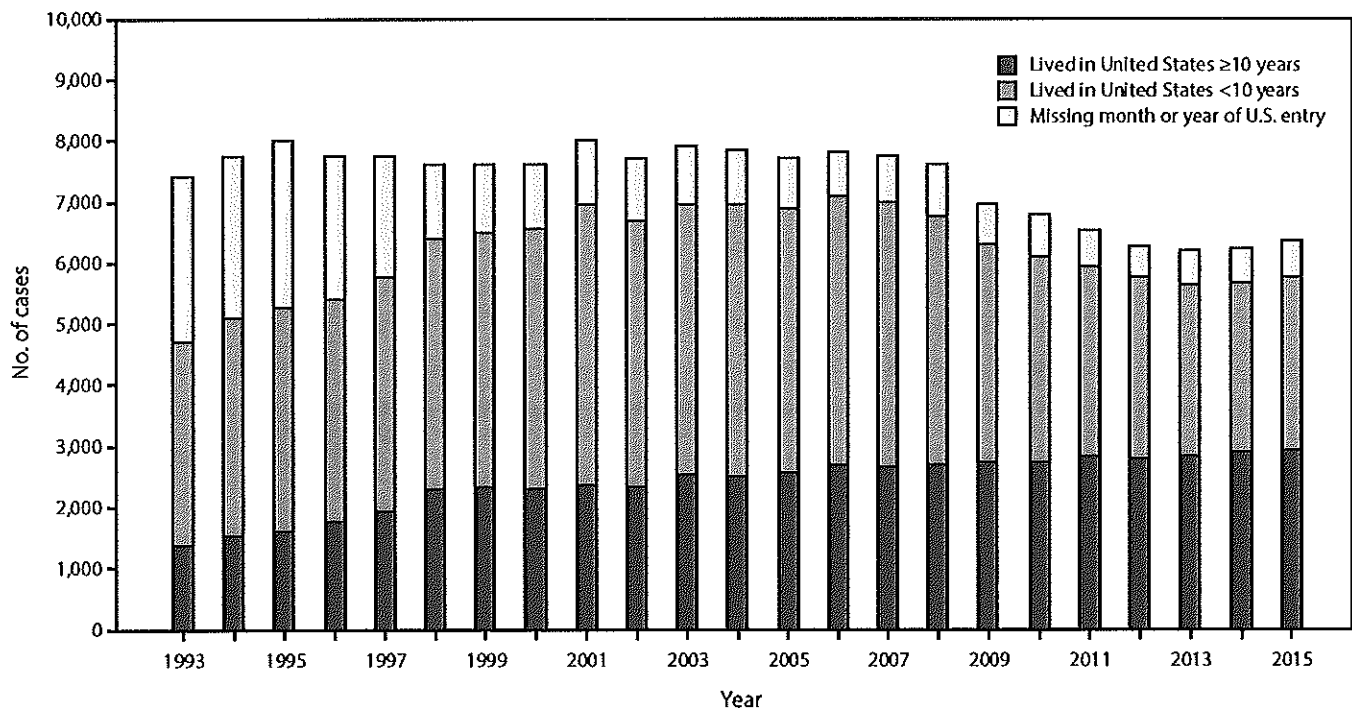
missing month or year of U.S. entry were excluded from the analysis when comparing the two groups. Persons < 10 years of age were also excluded from the comparison analysis because they could not have lived in the United States for ≥ 10 years. Adjusted odds ratios were calculated using a logistic regression model and backward elimination of variables with statistically insignificant effects ($p > 0.05$) in the model to assess the association between receiving a diagnosis of TB disease ≥ 10 years after U.S. entry compared with < 10 years after U.S. entry and a demographic characteristic or TB risk factor. Age at diagnosis was modeled categorically and divided into 10-year groups.

During 1993–2015, the number and proportion of TB cases among foreign-born persons who were missing month or year of U.S. entry declined from 2,689 (36.3%) to 587 (9.2%), and the number and proportion of TB cases among foreign-born persons who arrived in the United States ≥ 10 years before diagnosis increased from 1,360 (18.4%) in 1993 to 2,922 (46.0%) in 2015 (Figure). During 2010–2015, 38,345 new cases of TB were reported among foreign-born persons, 34,866 (90.9%) of whom had complete U.S. entry date information. During 2010–2015, among all foreign-born persons with TB disease, the median interval from arrival in the United States to developing TB was 9 years, (interquartile range [IQR] = 2–21 years); the median age at arrival was 29 years (IQR = 21–43 years), and the median age at TB diagnosis was 45 years (IQR = 30–62 years). Among foreign-born persons with TB diagnosed after residing ≥ 10 years in the United States, the median time spent in the United States before developing TB was 21 years (IQR = 14–31 years) compared with 2 years (IQR = 0–5 years) among persons who resided in the United States < 10 years. The median age at arrival for both TB patients who had been in the United States ≥ 10 years and < 10 years before diagnosis was 29 years (IQR = 20–42 years, IQR = 22–44 years, respectively). The median age at TB diagnosis was 56 years (IQR = 43–69 years) for persons with TB diagnosed after ≥ 10 years in the United States, compared with 33 years (IQR = 25–48 years) for persons with TB diagnosed < 10 years in the United States. The top three countries of origin for persons with TB diagnosed ≥ 10 years after U.S. arrival were Mexico (26.8%), the Philippines (14.0%), and Vietnam (9.2%), whereas the top three countries of origin among persons with diagnoses < 10 years after U.S. arrival were Mexico (14.3%), India (10.6%), and the Philippines (10.3%). After

* The U.S. insular areas are American Samoa, Guam, Puerto Rico, U.S. Virgin Islands, and Commonwealth of the Northern Mariana Islands.

† The freely associated states are the sovereign nations that have signed compacts of free association with the United States (Federated States of Micronesia, Republic of the Marshall Islands, and Republic of Palau).

FIGURE. Number of tuberculosis cases diagnosed among foreign-born persons <10 years and ≥10 years after arrival in the United States, 1993–2015



adjusting for other factors in the multivariable model, ≥10-year residents were significantly more likely to be aged ≥40 years and to report being of Hispanic ethnicity (Table). Similarly, ≥10-year residents were independently associated with residing in a long-term care facility at diagnosis, reporting excess alcohol use during the year preceding diagnosis, and having a history of a non-HIV-related immunocompromising condition, including diabetes mellitus, end-stage renal disease, tumor necrosis factor- α antagonist therapy, or having received an organ transplant (Table). However, ≥10-year residents had lower odds of being a resident of a correctional facility at the time of diagnosis (Table).

Discussion

In recent years, more U.S. TB diagnoses among foreign-born persons occurred ≥10 years after arrival in the United States than among foreign-born persons in the United States <10 years. In 2013, for the first time, the number of TB cases diagnosed among foreign-born persons after ≥10 years in the United States was higher than the number diagnosed among persons in the United States for <10 years. Historically, TB prevention measures for foreign-born persons have focused on screening persons before or shortly after arrival in the United States and on finding and treating active TB disease (6). Although the joint effects of overseas and domestic TB prevention strategies are

substantial, their independent effects on the trends of U.S. TB cases are unknown. Whereas TB case rates among foreign-born persons are highest among those who have newly arrived in the United States (8), rates of TB diagnosed among foreign-born persons ≥10 years after arrival remain substantially higher than those among U.S.-born persons. Most TB in the United States is thought to be a consequence of infection acquired years in the past, and recent estimates are that 92.5% of TB among foreign-born persons is caused by reactivation of LTBI (7). Therefore, most TB among foreign-born persons, even those who arrived ≥10 years ago, is probably attributable to infections acquired before U.S. arrival. These data support the recommendations by CDC and USPSTF to screen and treat persons with LTBI who were born in, or are former residents of, countries with increased TB prevalence regardless of time since arrival in the United States or age (2,3).

The findings in this report are subject to at least two limitations. First, NTSS does not routinely collect data regarding overseas travel by foreign-born patients since initial U.S. arrival; therefore, an unknown number of ≥10-year residents might have become infected with TB during more recent travel outside the United States. Second, data for month or year of first entry into the United States were missing for 9.1% of TB cases among foreign-born persons during 2010–2015. The majority of persons who reported year of U.S. entry without month information

TABLE. Characteristics and adjusted odds ratios of foreign-born patients receiving a tuberculosis (TB) diagnosis ≥ 10 years versus < 10 years after arrival in the United States, 2010–2015*

| Characteristic | No. (%) TB cases | | Adjusted odds ratio (95% CI) [†] |
|--|--|---|---|
| | Diagnosed < 10 years after U.S. arrival (n = 17,492) | Diagnosed ≥ 10 years after U.S. arrival (n = 16,989) | |
| Sex | | | |
| Male | 9,826 (56.2) | 10,390 (61.2) | 1.1 (1.0–1.2) |
| Female | 7,663 (43.8) | 6,595 (38.8) | Referent |
| Race/ethnicity [§] | | | |
| Black | 3,445 (19.7) | 1,342 (7.9) | 0.5 (0.4–0.6) |
| Asian | 7,757 (44.4) | 7,920 (46.6) | 0.8 (0.7–0.9) |
| Hispanic | 5,124 (29.3) | 6,455 (38.0) | 1.3 (1.2–1.5) |
| White | 685 (3.9) | 934 (5.5) | Referent |
| Other | 481 (2.0) | 338 (2.7) | 0.7 (0.5–0.8) |
| Age group (yrs) [¶] | | | |
| 10–19 | 1,271 (7.3) | 140 (0.8) | 0.2 (0.2–0.3) |
| 20–29 | 5,652 (32.3) | 886 (5.2) | 0.3 (0.3–0.3) |
| 30–39 | 4,211 (24.1) | 2,245 (13.2) | Referent |
| 40–49 | 2,309 (13.2) | 3,114 (18.3) | 2.4 (2.2–2.6) |
| 50–59 | 1,606 (9.2) | 3,433 (20.2) | 3.6 (3.3–3.9) |
| 60–69 | 1,244 (7.1) | 2,940 (17.3) | 3.9 (3.6–4.3) |
| 70–79 | 874 (5.0) | 2,392 (14.1) | 4.5 (4.0–4.9) |
| ≥ 80 | 325 (1.9) | 1,839 (10.8) | 9.1 (8.0–10.5) |
| Resident of correctional facility at time of diagnosis | 910 (5.2) | 309 (1.8) | 0.4 (0.4–0.5) |
| Resident of long-term care facility at time of diagnosis | 91 (0.5) | 297 (1.8) | 1.6 (1.3–2.2) |
| Excess alcohol use within the previous year** | 848 (4.9) | 1,361 (8.1) | 1.5 (1.3–1.6) |
| Diabetes mellitus | 1,455 (8.3) | 3,794 (22.3) | 1.3 (1.2–1.4) |
| HIV status at time of diagnosis | | | |
| Positive | 929 (5.3) | 685 (4.0) | 0.9 (0.8–1.1) |
| Unknown ^{††} | 2,089 (11.9) | 3,064 (18.0) | 1.1 (1.0–1.2) |
| Immunosuppression (not HIV/AIDS) ^{§§} | 325 (1.9) | 880 (5.2) | 1.6 (1.4–1.9) |
| End-stage renal disease | 160 (0.9) | 535 (3.2) | 1.3 (1.1–1.6) |
| TNF- α antagonist therapy | 47 (0.3) | 131 (0.8) | 2.2 (1.5–3.2) |
| Previous organ transplantation | 18 (0.1) | 121 (0.7) | 2.5 (1.5–4.2) |

Abbreviations: AIDS = acquired immunodeficiency syndrome; CI = confidence interval; HIV = human immunodeficiency virus; TNF- α = tumor necrosis factor alpha.* Multivariable model: other characteristics investigated but not significant ($p > 0.05$) in the univariate analysis included having extrapulmonary site of disease only, previous history of TB, being homeless within previous year, reporting injecting drug use within previous year, and reporting noninjecting drug use within previous year.[†] Odds ratios are for the association between each exposure variable and whether the patient had resided in the United States for ≥ 10 years or < 10 years. Each odds ratio was adjusted for all of the other exposure variables displayed in the table using multivariable logistic regression.[§] Black, Asian, white and "other" are non-Hispanic. The "other" racial/ethnic category includes non-Hispanic Native Hawaiian and Other Pacific Islander, non-Hispanic American Indian/Alaskan Native, those of unknown race, and those reporting multiple races.[¶] Persons aged 0–9 years were excluded, because they could not have lived in the United States for ≥ 10 years.^{**} For variable definitions, refer to the following: CDC. CDC Tuberculosis Surveillance Data Training Report of Verified Case of Tuberculosis (RVCT) Self-Study Modules Participant Manual. Atlanta, GA: U.S. Department of Health and Human Services, CDC; 2009. <https://www.cdc.gov/tb/programs/rvct/default.htm>.^{††} Laboratory HIV test was either refused or not offered or result was indeterminate or unknown or HIV status was unknown or missing.^{§§} These data do not include HIV-infected patients, but patients who reported immunosuppression caused by either a medical condition or medication, or immunosuppressive therapy.

(and were therefore excluded from the comparison analysis) were among those in whom TB was diagnosed ≥ 10 years after U.S. arrival; if these persons had been included in this analysis, the number of TB cases diagnosed among foreign-born persons ≥ 10 years after U.S. arrival would have been even higher.

Historically, TB prevention activities in the United States have been implemented primarily by the public health sector (9). If CDC and USPSTF recommendations are implemented (2,3), prevention activities, including screening for TB infection through the use of the tuberculin skin test or interferon-gamma release assays, might need to be expanded beyond the public health sector to include private providers

and community health centers to better reach populations that have lived in the United States for ≥ 10 years. The findings of this analysis that the diagnosis of TB in foreign-born persons ≥ 10 years after U.S. arrival is independently associated with being a resident of a long-term care facility and having non-HIV-related immunocompromising conditions (including, but not limited to, diabetes mellitus or end-stage renal disease) underscore the importance of LTBI screening and treatment to prevent TB disease in these populations. Continued initiatives for overseas and domestic screening as well as expanding partnerships with both private and public health care providers will be important in promoting testing and treatment for LTBI.

Summary

What is already known about this topic?

Tuberculosis (TB) screening in the United States of persons from high TB-prevalence countries has historically focused on newly arrived persons. U.S. TB cases typically occur among persons who were infected years before experiencing disease. Persons with latent TB infection have a 5%–10% lifetime risk for developing TB disease in the United States.

What is added by this report?

Beginning in 2013, the number of TB diagnoses among foreign-born persons ≥ 10 years after U.S. arrival (2,823) has exceeded those among persons < 10 years after U.S. arrival (2,814). In 2015, among 5,763 TB cases diagnosed in foreign-born persons in the United States for whom the date of U.S. entry was known, 2,922 (51%) were diagnosed in persons ≥ 10 years after U.S. arrival. Foreign-born persons who received a TB diagnosis ≥ 10 years after U.S. arrival had greater odds of being aged ≥ 40 years, residing in a long-term care facility at diagnosis, and having non-HIV-related immunocompromising conditions.

What are the implications for public health practice?

Promoting testing for TB infection as part of routine primary care among groups at high risk is crucial for advancing TB prevention and elimination initiatives in the United States. Emphasis should be focused on persons who have lived in countries with high TB prevalence, including persons who have resided in the United States for ≥ 10 years.

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